

REMARKS/ARGUMENTS

Favorable reconsideration of this application is respectfully requested.

Claims 1-19 are pending in this application.

The outstanding Office Action includes a repeated rejection of Claims 1, 3-5, 7-11, 13, 14, and 16-19 under 35 U.S.C. § 102(b) as being anticipated by Paulraj et al (U. S. Patent No. 6,351,499, Paulraj) and a repeated rejection of Claims 2, 3, 6, 8, 12, 13, 15, and 17 under 35 U.S.C. § 103(a) as being unpatentable over Paulraj in view of Hadad (U. S. Patent No. 7,133,352).

The outstanding Action begins with a “Response to Arguments” section spanning pages 2-3 that clearly show that the PTO has either misinterpreted or not understood the arguments presented at pages 2-7 of the response filed March 19, 2007.

In this respect, the first full paragraph on page 2 of the outstanding Action appears to suggest that the PTO is interpreting the Paulraj teaching of CDMA taken with the mere suggestion at col. 7, line 30 and 31 of Paulraj of a possible alternative to its disclosed arrangements that would somehow make “use of different carrier frequencies (multi-carrier techniques)” to be a teaching of the claimed “multicarrier CDMA scheme” with the claimed “plurality of multicarrier CDMA transmit means” of Claims 1 and 11 and the corresponding “plurality of multicarrier CDMA receiving means” of Claims 5 and 11.

The problem with this interpretation is that Paulraj does not teach if each antenna is to transmit using a different carrier frequency or if plural antennas are provided as a plurality of antenna groups with each antenna group having plural antennas that all use a carrier frequency different from the carrier frequency of the antennas in another group.

Moreover, while col. 7, line 32 mentions “spreading codes” it is as an optional alternative to the suggested “use of different carrier frequencies (multi-carrier techniques).” In this regard, the clear language of col. 7, lines 30-32 is that of presenting two alternatives

relative to the noted plural “approaches” of using either “different carrier frequencies (multi-carrier techniques) or spreading codes,” which is not a suggestion of using the claimed “multicarrier CDMA scheme” that requires spreading for transmitting the multicarrier CDMA and inversely spreading upon receipt of the multicarrier CDMA.

The alternative suggestions of col. 7, lines 30-32 are not disclosures that clearly and definitely teach the claimed multicarrier CDMA scheme and cannot be said to be sufficient to establish anticipation of the claimed multicarrier CDMA scheme. Note, for example, In re Hughes 145 USPQ 467, 471 (CCPA 1965) and In re Moreton, 129 USPQ 227, 230 (CCPA 1961).

Turning to the rebuttal argument of the second full paragraph on page 2 of the outstanding Action, it is clear that the PTO again places mistaken reliance on col. 7, lines 30-32 of Paulraj to teach the required modifications to make the Paulraj disclosed embodiments into alternative embodiments actually using the claimed “multicarrier CDMA scheme” with the claimed “plurality of multicarrier CDMA transmit means” of Claims 1 and 11 and the corresponding “plurality of multicarrier CDMA receiving means” of Claims 5 and 11. As noted above, however, these ambiguous and vague suggestions of using either “different carrier frequencies (multi-carrier techniques) or spreading codes” are not teachings of these claimed means.

Moreover, the rebuttal of the third full paragraph on page 2 of the outstanding action and that of the paragraph bridging pages 2 and 3 thereof both completely miss the point made in the last response as to the difference between the claimed “mapping means” and the completely dissimilar mapping taught by Paulraj as well as the burden on the PTO as to establishing inherency.

With regard to the “mapping means,” the last response pointed out that:

[T]here are no teachings or suggestions in Paulraj as to the “mapping means” of independent Claims 1 and 11 at col. 9, lines 1-13, as indicated in

the outstanding Action. In this regard, these relied upon teachings from col. 9, lines 1-13, of Paulraj relate to providing transmit signals assigned to different antennas, not to mapping output signals “to signal points on a conjugate plane.”

Simply put, mapping “output signals from said encoding interleaving means to signal points on a conjugate plane” followed by the claimed converting of the “output signals from said mapping means into Nc/SF parallel signals” followed by the claimed “encoding” of these converted signals and the claimed “multicarrier CDMA transmit means” processing before the feeding of signals from this last means to the transmit antennas does not in any way reasonably correspond to the Paulraj S-T Coding Unit 66 and transmit processing unit 72 mapping that maps output streams directly to the transmit antennas. The PTO has failed to properly construe the “mapping means” and all of the other “means” of Claims 12-19 in violation of the requirements of Gechter v. Davidson 116 F.3d 1454, 1460, 43 USPQ2d 1030, 1035 (Fed. Cir. 1997) set forth as follows:

In addition, the [PTO] never construed the scope of the structures disclosed in the specification for the claimed "receiving means," nor did the [PTO] expressly find that the "receiving means" disclosed in the specification was structurally equivalent to that embodied in [the reference]. Moreover, the [PTO] also failed to define the exact function of the receiving means, as well as to find that [the reference] disclosed the identical function. [Emphasis added, citation omitted.]

Further, the outstanding Action once again improperly asserts “inherent” as to the recited de-mapping means of Claims 5 and 11. As noted in the last response and ignored by the outstanding Action, it is well established that “[i]n relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art.” *Ex parte Levy*, 17 USPQ2d 1461, 1464 (BPAI 1990) (emphasis in original). There is once again no explanation in the outstanding Action as to any reason why a “re-mapping means” would be inherently present between the parallel to serial converter 96 and de-interleaver de-coder 98 of Paulraj other than conjecture that if the “mapping” claimed

here would have been taught by Paulraj, which is not the case as explained above, then this claimed mapping would require the claimed de-mapping. However, Paulraj only teaches mapping outputs to respective antennas, not the claimed mapping of “output signals from said encoding interleaving means to signal points on a conjugate plane” followed by the claimed converting and other processing noted above.

Besides this improper reliance on inherency as to independent Claims 5 and 11, the outstanding Action once again improperly relies on elements 126 and 128 from the OFDMA embodiment of the FIG. 7 arrangement of Paulraj as if there were a teaching in Paulraj to employ these elements with the FIG. 4 arrangement. The combining of Figures 3 and 6 and Figures 7 and 8 is taught only by the PTO in the first full paragraph on page 3 of the outstanding rejection, not by Paulraj.

*See In re Kotzab*, 217 F.3d 1365, 1371, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000) as follows:

[A] rejection cannot be predicated on the mere identification in [one reference] of individual components of claimed limitations. Rather, particular findings must be made as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination in the manner claimed.

As noted in the last response, anticipation requires the citation of a single prior art reference that discloses each and every element arranged together exactly as in the claimed arrangement. *See In re Bond*, 15 USPQ2d 1566 (Fed. Cir. 1990); *Lindemann Maschinen Fabrik GMBH v. American Hoist & Derrick Co.*, 221 USPQ 481 (Fed. Cir. 1984); *Ex parte Gould*, 6 USPQ2d 1680 (BPAI. 1987); and *Ex parte Osmond*, 191 USPQ 334 (BPAI. 1973). Thus, and as fully explained by the Board in Osmond, at 191 USPQ 336, isolated teachings having no teaching as to combining such isolated teachings cannot be said to anticipate a claimed invention simply because these unconnected features all appear in one reference. There must always be something in the reference directing the person skilled in the pertinent

art to make the selections necessary from all the isolated disclosures of the reference to formulate a combination having the specific combination of features claimed, theories presented later by a PTO paper cannot substitute for the required reference teaching of the combination. *See In re Rijckaert*, 9 F. 3d 1531, 1533, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993)

Similarly, there is no teaching in Paulraj suggesting the use of serial to parallel converter 120 of the OFDMA embodiment of the FIG. 6 of Paulraj to receive an output from the Figure 3 Space-Time Coding unit 66. Thus, the last paragraph on page 3 of the outstanding Action compounds the error of the last Action (repeated, for example, at page 5 of the outstanding Action) that extracts components (like 122 and 124) from the OFDMA embodiment of Figure 6 and asserts the combination of this OFDMA Figure 6 embodiment with the unrelated Figure 3 embodiment. This combination of selected components lifted from each of the mutually exclusive embodiments of Figures 3 and 6 is not a teaching of Paulraj and thus not a combination that can be relied upon to establish anticipation.

Accordingly, the 35 U.S.C. § 102(b) anticipation rejection asserted as to independent Claims 1, 5, and 11 is traversed as to each of these claims for the reasons set forth above, and the withdrawal thereof is again respectfully requested.

As Claims 3, 4, 7-10, 13, 14, and 16-19 depend either directly or indirectly on one or the other of these above-noted independent claims and, thus, include all the limitations thereof, the 35 U.S.C. § 102(b) anticipation rejection asserted as to dependent Claims 3, 4, 7-10, 13, 14, and 16-19 is traversed as to each of these claims for the reasons set forth above, and the withdrawal thereof is respectfully requested.

In addition, each of dependent Claims 3, 4, 7-10, 13, 14, and 16-19 recite additional features not taught or suggested by Paulraj and further patentably distinguish over this reference for this reason as well.

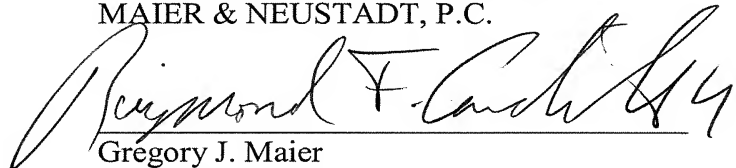
With further regard to dependent Claims 2, 3, 6, 8, 12, 13, 15, and 17 under 35 U.S.C. § 103(a) as being unpatentable over Paulraj in view of Hadad, it is first noted that Hadad cures none of the above-noted deficiencies of Paulraj. Moreover, as these dependent claims depend either directly or indirectly on one or the other of these above-noted independent claims and, thus, include all the limitations thereof, the obviousness rejection asserted as to dependent Claims 2, 3, 6, 8, 12, 13, 15, and 17 is traversed as to each of these claims because neither of the applied references teach all the limitations of these claims. Accordingly, the withdrawal of this obviousness rejection is also respectfully requested.

In addition, each of dependent Claims 2, 3, 6, 8, 12, 13, 15, and 17 recite additional features not taught or suggested by Paulraj taken alone or with Hadad in any proper combination, and accordingly, these dependent claims are respectfully submitted to further patentably distinguish over these references for this reason as well.

As no further issues are believed to remain outstanding in the present application, it is believed that this application is clearly in condition for formal allowance and an early and favorable action to that effect is, therefore, respectfully requested.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,  
MAIER & NEUSTADT, P.C.



Gregory J. Maier  
Attorney of Record  
Registration No. '25,599

Customer Number  
**22850**

Tel: (703) 413-3000  
Fax: (703) 413 -2220  
(OSMMN 06/04)  
I:\ATTY\RFC\24\240872-RECON2.DOC

Raymond F. Cardillo, Jr.  
Registration No. 40,440